

REMARKS

Claims 1 - 3 remain active in this application. No amendments have been made and no new matter has been introduced into the application. Acknowledgment of the priority claim and receipt of the priority document as well as consideration of documents cited in the Information Disclosure Statement filed April 6, 2004, are noted with appreciation.

Claims 1 - 3 have been rejected under 35 U.S.C. §102 as being anticipated by Mitani et al. This sole ground of rejection is respectfully traversed since Mitani et al. does not contain the teachings the Examiner attributes to it.

The invention seeks to provide an inkjet printer head which can withstand a greatly increased number of ink ejection cycles (e.g. from about 10^8 cycles to above 10^{10} cycles or a factor of more than 100). As explicitly disclosed, particularly on pages 13 - 14 of the specification, this dramatic increase in useful life of the printer head is achieved by forming the heating resistor to have a thickness in a range of "from 2 μm to 5 μm " as recited in claim 1. This range is largely counter-intuitive in consideration of the resistance which must be maintained in order to use a drive circuit which is practical. The Examiner asserts this thickness of the heating resistor to be taught by Mitani et al. and cites column 5, lines 30 - 34, as containing this particular teaching. However, this passage states:

"Each thermal heater was formed by first thermally oxidizing a silicon substrate to form on its upper surface an approximately 2 μm thick layer of SiO_2 . On top of the silicon substrate was formed in sequence a Ta-Si-O *thin film* and a nickel *thin film*. The resulting product was photoetched to produce a thermal heater having a surface area of 50 μm ." (emphasis added)

Thus it is seen that the passage relied upon by the Examiner specifies an *insulator* layer of SiO_2 rather than a *heating resistor* to be about $2\text{ }\mu\text{m}$ thick and does not specify any thickness for a *resistive or conductive film* which is used to form the heater resistor and connections thereto but refers to each of these layers as a "*thin film*". Moreover, Mitani et al. is primarily concerned with heating resistor alloy composition and the only references to heating resistor thickness in Mitani et al. seen is at column 3, line 46, where the alloy film is deposited to a thickness of "approximately $1,000\text{ }\text{\AA}$ " ($= 0.1\text{ }\mu\text{m}$, far thinner than the thickness claimed, (but no indication of final resistor thickness is stated) and at column 4, line 40, where the alloys in samples 9 and 10 would need to be formed at a thickness of "about $200\text{ }\text{\AA}$ " to obtain the desired resistance and are thus deemed to be "impractical".

Therefore, it is respectfully submitted that Mitani et al. does not, in fact, teach the explicitly recited range of heating resistor thickness as the Examiner asserts and thus does not anticipate any claim in the application. Further, the Examiner's error in this regard clearly prevents anticipation of any claim from being *prima facie* demonstrated. Accordingly, reconsideration and withdrawal of this sole ground of rejection are respectfully requested.

Since all rejections, objections and requirements contained in the outstanding official action have been fully answered and shown to be in error and/or inapplicable to the present claims, it is respectfully submitted that reconsideration is now in order under the provisions of 37 C.F.R. §1.111(b) and such reconsideration is respectfully requested. Upon reconsideration, it is also respectfully submitted that this application is in condition for allowance and such action is therefore respectfully requested.

If an extension of time is required for this response to be considered as being timely filed, a conditional petition is hereby made for such extension of time. Please charge any deficiencies in fees and credit any overpayment of fees to Attorney's Deposit Account No. 50-2041.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Marshall M. Curtis".

Marshall M. Curtis
Reg. No. 33,138

Whitham, Curtis, Christofferson & Cook, P. C.
11491 Sunset Hills Road, Suite 340
Reston, Virginia 20190

(703) 787-9400
Customer Number: 30743